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(54) **A device for improving the function of a spray bar in a printing press**

Vorrichtung zum Verbessern der Wirkung eines Sprühbalkens in einer Druckmaschine

Dispositif pour améliorer le fonctionnement d'un rail de pulvérisation dans une machine d'impression

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(56) References cited:
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Description

Technical Field

This invention relates to a device for improving the function of a spray bar, intended for spraying a fluid on a roller in a printing press.

Technical Background

The main object of the invention is to improve the function of a spray bar for spraying an ink removing solvent on an inking roller, but the teachings of the invention are equally applicable to other spray bars.

A spray bar may be arranged adjacent to the uppermost roller or drum of an inking device or inking train in a printing press. Such an inking device comprises a number of rollers and/or drums for the purpose of conveying printing ink from a supply thereof to the printing cylinders, normally in a substantially vertical direction.

Rather frequently the inking device has to be cleaned from ink, for example when a new colour is to be employed in the printing process. Such a cleaning may be performed in that ink removing solvent is sprayed on the uppermost roller or drum in the inking device by the spray bar provided with nozzles for that purpose. During this process the drums and rollers are rotated but are disconnected from the ink supply and the printing cylinders, and the ink removed by the solvent can be scraped off by cleaning blades and collected in trays. By this automated process the need for manual cleaning has been eliminated.

As the spray bar is mounted adjacent a roller, which during the printing process rotates at a considerable speed with ink thereon, it is subjected to ink mist and contaminants, which may disturb the function of the nozzles, when they later shall spray the washing or ink removing solvent.

It is already known through US-A-3 897 726 to close drip nozzles in a printing press by means of seals.

The object of the invention is to remove the drawback with clogged nozzles in the spray bar.

The Invention

This is according to the invention attained in that the nozzles of the spray bar are enclosed and protected from ink mist and other contaminants except when fluid is to be sprayed.

A cover provided with openings corresponding to the nozzles on the spray bar is slidably arranged on the spray bar over the nozzles so as to be movable between a first position, in which the nozzles can spray through the openings, and a second position, in which the nozzles are covered. The cover may be connected to a pneumatic cylinder for its movement.

The Drawings

The invention will be described in further detail below under reference to the accompanying drawings, in which Figs 1a and 1b in top views of a spray bar with a cover illustrate the principle of a preferred embodiment, Figs 2a, 2b and 2c are side views of a spray bar with a cover according to the preferred embodiment in three operating positions, and Fig 3 is a view, partly in section, along the line III-III in Fig 2a.

Detailed Description of Embodiments

A spray bar 1 with spray nozzles 2 is shown in a top view in Figs 1a and 1b. Such a spray bar 1 is to be mounted adjacent an inking roller in a printing press for the purpose of spraying ink removing solvent on the roller. A cover 3 is slidably arranged on the spray bar 1 above the spray nozzles 2 and is provided with openings 4 corresponding to the nozzles 2. In Fig 1a the cover 3 is shown in a position relative to the spray bar 1 that enables the nozzles to spray its solvent through the openings 4. In Fig 1b, on the other hand, the cover 3 has been displaced relative to the spray bar 1, so that all nozzles are covered; this is the position chosen at all times when the inking roller performs its normal function to convey printing ink, which may reach the spray bar and its nozzles in the form of ink mist, unless they are covered.

In Figs 2a-c a practical arrangement with a spray bar 1 mounted in a printing press is shown in side views.

The spray bar 1 is mounted by means of a left attachment 5 and a right attachment 6 in a printing press frame 7. The spray bar 1 is connected to a conduit in the right attachment 6 for pressurized solvent by means of a quick-coupling 8. The right attachment 6 also contains a pneumatic cylinder, whose piston rod 9 is connected to a bracket 10 on the cover 3, which accordingly can be displaced in the way described above with reference to Figs 1a and 1b. The positions shown in Figs 1a and 1b correspond to those according to Fig 2a and 2b, respectively.

The connection between the piston rod 9 and the bracket 10 may preferably be performed by means of a spring-biassed connection member 11, which may be pivoted from the position shown in Figs 2a and 2b, in which it is transverse to the piston rod 9 and connects the latter to the bracket 10, to the position shown in Fig 2c, in which it is coaxial with the piston rod 9 and can slide through the hole in the bracket 10 for disconnection of the cover 3 and thus the whole spray bar 1.

Fig 2c illustrates how the cover 3 is disconnected from the piston rod 9 and the quick-coupling 8 decoupled by sliding the spray bar 1 to the left in the left attachment 5 against a compression spring (not shown) so that the spray bar 1 can be removed, for example for cleaning.

Fig 3 is a view along the line III-III in Fig 2a. A nozzle 2 is arranged in the spray bar 1, whose lower part or

part to the right in Fig 3 is a tube for conveying the solvent to the nozzles. The cover 3 with its openings 4 is slidably arranged on the spray bar 1. The cover bracket 10 is connected to the piston rod 9, extending from the right attachment 6, by means of the connection member 11.

It should be pointed out that the discrete nozzles 2 in the spray bar 1 may be replaced by holes in a tube extending longitudinally in the spray bar.

Claims

1. A device for improving the function of a spray bar (1), intended for spraying a fluid on a roller in a printing press, **characterized** in that a cover (3) provided with openings (4) corresponding to the nozzles (2) on the spray bar (1) is slidably arranged on the spray bar over the nozzles so as to be movable between a first position, in which the nozzles can spray through the openings, and a second position, in which the nozzles are covered.

2. A device according to claim 1, **characterized** in that the cover (3) is connected to a pneumatic cylinder (9) for its movement between the two positions.

3. A device according to claim 2, **characterized** in that after the disconnection of the cover (3) from the pneumatic cylinder (9) the spray bar (1) as a unit may be removed by sliding it in one direction against the force of a spring.

Patentansprüche

1. Vorrichtung zum Verbessern der Wirkung eines Sprühbalkens (1), der zum Sprühen eines Fluids auf eine Walze in einer Druckpresse dient, dadurch gekennzeichnet, daß eine Abdeckung (3), die mit Öffnungen 4 versehen ist, welche den Düsen (2) auf dem Sprühbalken (1) entsprechen, verschieblich auf dem Sprühbalken über den Düsen angeordnet ist, so daß sie zwischen einer ersten Position, in der die Düsen durch die Öffnungen sprühen können, und einer zweiten Position, in der die Düsen abgedeckt sind, bewegbar ist.

2. Vorrichtung nach Anspruch 1, dadurch gekennzeichnet, daß die Abdeckung (3) mit einem Pneumatikzylinder (9) für ihre Bewegung zwischen den beiden Positionen verbunden ist.

3. Vorrichtung nach Anspruch 2, dadurch gekennzeichnet, daß nach dem Lösen der Abdeckung (3) von dem Pneumatikzylinder (9) der Sprühbalken (1) als Einheit abgenommen werden kann, indem er in einer Richtung gegen die Kraft einer Feder geschoben wird.

Revendications

1. Dispositif pour améliorer le fonctionnement d'une barre (1) de pulvérisation, destinée à pulvériser un fluide sur un rouleau dans une presse d'imprimerie, caractérisé en ce qu'un capot (3) pourvu d'ouvertures (4) correspondant aux gicleurs (2) sur la barre (1) de pulvérisation est agencé de façon coulissante sur la barre de pulvérisation au-dessus des gicleurs afin d'être mobile entre une première position, dans laquelle les gicleurs peuvent pulvériser à travers les ouvertures, et une seconde position dans laquelle les gicleurs sont recouverts.

2. Dispositif selon la revendication 1, caractérisé en ce que le capot (3) est relié à un cylindre pneumatique (9) pour son mouvement entre les deux positions.

3. Dispositif selon la revendication 2, caractérisé en ce que, après que le capot (3) a été désaccouplé du cylindre pneumatique (9), la barre (1) de pulvérisation peut être enlevée d'un seul bloc en étant déplacée en coulissant dans un sens contre la force d'un ressort.

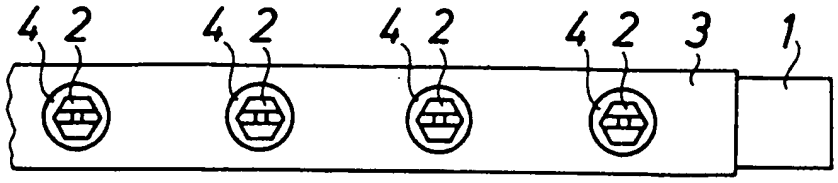

FIG. 1a

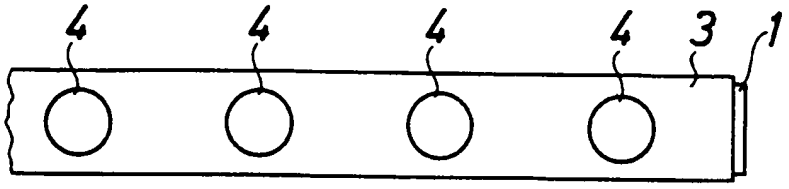

FIG. 1b

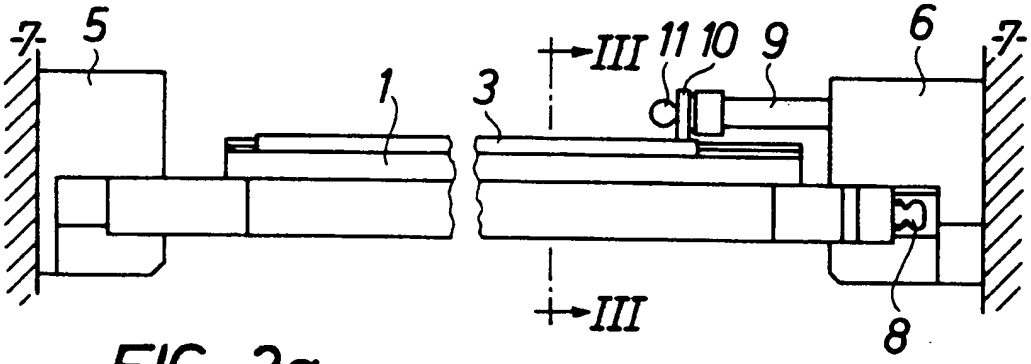

FIG. 2a

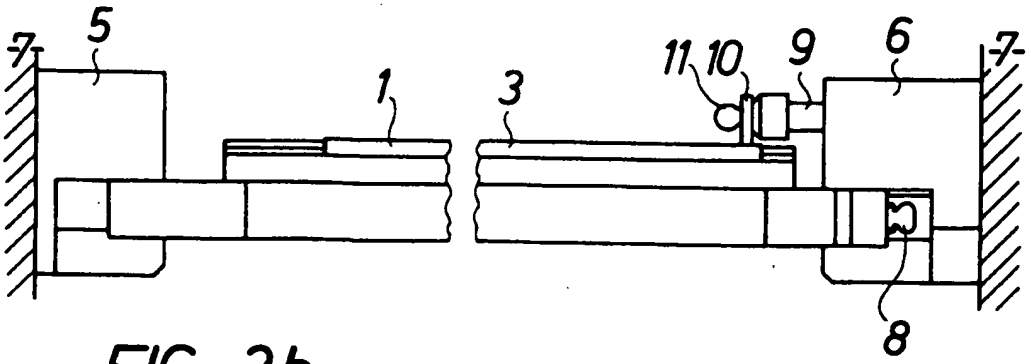

FIG. 2b

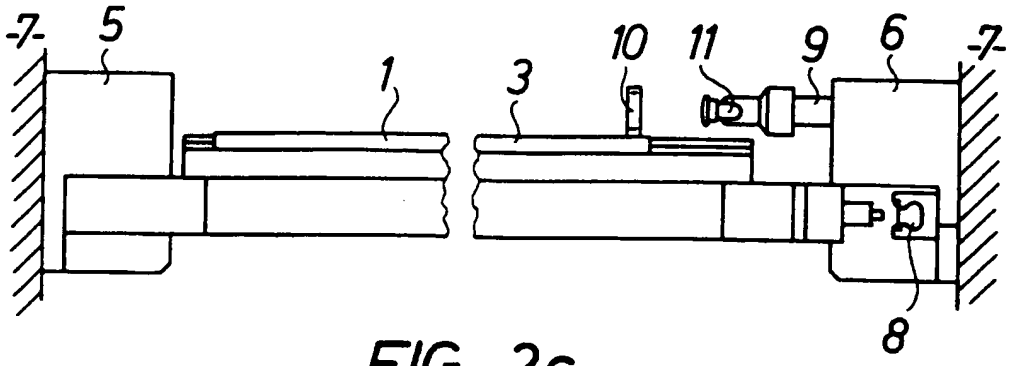

FIG. 2c

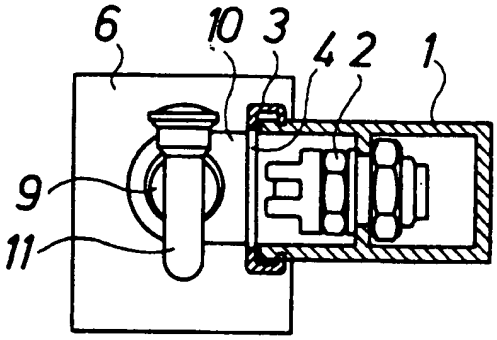

FIG. 3